CLAIM AMENDMENTS

Please replace the pending claims with the following:

1. (Original) An electrochemical element with a cathode, an anode and an electrolyte arranged between the cathode and anode, which electrolyte comprises an ionic liquid comprising an anion and a cation, which cation has a pyrrolidinium ring structure, and wherein the active material of the cathode comprises an intercalation material having an upper reversible-potential-limit of at most 4 V versus Li/Li^+.

2. (Original) The electrochemical element of claim 1, wherein the electrochemical element is a primary battery or a rechargeable battery or an electrochemical capacitor.

3. (Previously presented) The electrochemical element of claim 1, wherein the electrochemical element is configured for use at a temperature above 50 °C.

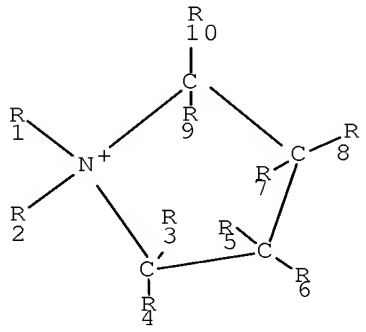
4. (Original) The electrochemical element of claim 3, wherein the electrochemical element is configured for use at a temperature between 60 and 200 °C.

5. (Previously presented) The electrochemical element of claim 1, wherein the pyrrolidinium ring structure has the formula: *N*-R_1-*N*-R_2-pyrrolidinium, wherein R_1 and R_2 are alkyl groups.

6. (Original) The electrochemical element of claim 5, wherein the pyrrolidinium ring structure has the formula *N*-methyl-*N*-butyl-pyrrolidinium.

7. (Original) The electrochemical element claim 5, wherein the pyrrolidinium ring structure has the formula *N*-methyl-*N*-hexyl-pyrrolidinium.

8. (Original) The electrochemical element of claim 1, wherein the pyrrolidinium structure is:



wherein R_1-R_{10} are either: H; F; separate alkyl groups which may be branched, substituted and comprise heteroatoms; separate phenyl groups which may be substituted and comprise heteroatoms.

9. (Previously presented) The electrochemical element of claim 1, wherein the anion of the ionic liquid comprises any of the following compounds:

ClO_4^-, PF_6^-, BF_4^-, AsF_{6-}, a halogen ion, $N(CF_3)_{2-}$, $N(CF_3SO_2)_2^-$, $CF_3SO_3^-$, $N(CH_3SO_2)_2^-$, $N(C_2F_5SO_2)_2^-$, $B(C_2O_4)_2^-$, $C(CF_3SO_2)_{3-}$.

10. (Original) The electrochemical element of claim 1, wherein the electrolyte further comprises a salt.

11. (Previously presented) The electrochemical element of claim 10, wherein the salt comprises an alkali salt.

12. (Original) The electrochemical element of claim 10, wherein the salt comprises $MgCF_3SO_2$ or $Mg(ClO_4)_2$.

13. (Previously presented) The electrochemical element of claim 1, wherein the active material of the cathode comprises an intercalation material as the major constituent by mass.

14. (Original) The electrochemical element of claim 13, wherein the cathode comprises as the major constituent by mass of the active material any of the following compounds: $Li_4Ti_5O_{12}$, $LiTi_2O_4$, $Li_{4-y}Mg_yTi_5O_{12}$ ($0 \leq y \leq 1$), V_2O_5, $Li_4Mn_5O_{12}$, $Li_{4-y}Mg_yMn_5O_{12}$ ($0 \leq y \leq 1$).

15. (Original) The electrochemical element of claim 13, wherein the cathode comprises $LiCrTiO_4$ as the major constituent by mass of the active material.

16. (Original) The electrochemical element of claim 13, wherein the cathode comprises TiS_2 as the major constituent by mass of the active material.

17. (Original) The electrochemical element of claim 13, wherein the cathode comprises $Li_{1-y}M_yFePO_4$, where M=Mg, Nb, Zr, Ti, Al and ($0 \leq y \leq 0.02$), as the major constituent by mass of the active material.

18. (Original) The electrochemical element of claim 1, wherein the anode comprises Lithium metal as the major constituent by mass of the active material.

19. (Original) The electrochemical element of claim 1, wherein the anode comprises as the major constituent by mass of the active material any of the following compounds: $Li_4Ti_5O_{12}$, $LiCrTiO_4$, $LiTi_2O_4$, $Li_{4-y}Mg_yTi_5O_{12}$ ($0 \leq y \leq 1$).

20. (Original) The electrochemical element of claim 1, wherein the cathode comprises as the major constituent by mass of the active material $Li_{1-a}FePO_4$ ($0 \leq a \leq 1$) and wherein the anode comprises as the major constituent by mass of the active material $Li_{(4-y)+b}Mg_yTi_5O_{12}$ ($0 \leq b \leq 3$ and ($0 \leq y \leq 1$).

21. (Original) The electrochemical element of claim 1, wherein the cathode comprises as the major constituent by mass of the active material $Li_{(4-y)+a}Mg_yMn_5O_{12}$ ($0 \leq a \leq 1$ and $0 \leq y \leq 1$) and wherein the anode comprises as the major constituent by mass of the active material $Li_{(4-y)+b}Mg_yTi_5O_{12}$ ($0 \leq b \leq 3$ and $0 \leq y \leq 1$).

22. (Previously presented) The electrochemical element of claim 1, wherein the cathode or anode comprises polyvinylidenefluoride (PVDF) as a binder material.

23. (Previously presented) The electrochemical element of claim 1, wherein the cathode or anode comprises polytetrafluoroethylene (PTFE) as a binder material.

24. (Withdrawn) A method of providing electrical energy in an underground wellbore, wherein the energy is provided by an electrochemical element according to claim 1.

25. (Withdrawn) The method of claim 24, wherein the wellbore forms part of an oil or gas production well or a geothermal well.

26. (Withdrawn) The method of claim 24, wherein the wellbore forms part of an oil or gas production well and oil or gas is produced through the well and wherein the flow of oil or gas is monitored and/or controlled by electric downhole monitoring or control equipment which is powered by an electrochemical element according to claim 1.